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HIGH-VOLTAGE LOW-DISTORTION INPUT PROTECTION CURRENT LIMITER

ABSTRACT OF THE DISCLOSURE

A floating symmetrical current limiter device blocks large bipolar input signals to the input circuit of an instrumentation device by transitioning between a low-impedance mode and a high-impedance mode. The current limiter device includes a signal path and a control path that are each coupled between an input terminal and an output terminal. The signal path has a low impedance that passes small differential signals across the limiter from the input terminal to the output terminal. The control path is responsive to large bipolar signals that appear across the limiter terminals by transitioning between a voltage divider and a constant-current source-based bias that controls the impedance of the signal path to become a large impedance, thereby blocking the large bipolar input signal from the output terminal.